

MISSOURI. Conservationist

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[NOTE TO OUR READERS]

Keep Getting Better

There is a time and season for everything. While I greatly enjoy the holiday traditions with my family, I also look forward to the start of a new year, which brings its own season of reflection and resolutions.

The custom of setting New Year's resolutions dates back to the Roman Empire, where they pledged their moral obligation to be good to others. In today's world, even with many of our resolutions focused on self-improvement, the goal of New Year's resolutions remains the same through the ages — keep getting better.

The Conservation Department is no different. We continue to build on our 78-year legacy of citizen-led conservation by outlining strategic priorities for the future to help us successfully manage fish, forest, and wildlife. Some of those priorities continue to build on the integral partnerships we've already developed over the years, but hope to keep expanding, such as private landowner conservation efforts. With more than 90 percent of land in Missouri privately owned, working with private landowners to improve habitat on their lands and waterways for healthier fish and wildlife populations is a critical goal in the state's continued conservation success.

We also continue to tackle the tough threats affecting the health of Missouri's fish, forest, and wildlife in Missouri, such as chronic wasting disease in our deer herd. Missouri offers some of the best deer hunting in the country and is an important part of many Missourians' lives and family traditions. Infectious diseases, such as chronic wasting disease, could reduce hunting and wildlife-watching opportunities for Missouri's nearly 520,000 deer hunters and almost 2 million wildlife watchers. Since 2001, the Department has collected and tested more than 41,000 free-ranging deer for chronic wasting disease statewide. The Conservation Commission also took further action to protect deer in Missouri by passing regulations last October regarding the operation of hunting preserves and wildlife breeding facilities to prevent the spread of diseases.

We've set some new goals that also extend to conservation efforts on a national level. In September, a national Blue Ribbon Panel was developed through the Association of Fish & Wildlife Agencies to work together to produce recommendations and policy options on a sustainable model to fund conservation on a full array of fish and wildlife species. Missouri is a national leader in fish, forest, and wildlife conservation due to Missouri citizens' unique and proactive support of conservation efforts, and I am honored to serve as a representative



Director
Robert L. Ziehmer

on the Blue Ribbon Panel with 23 other panelists working together on future conservation solutions.

But no matter how many priorities are in front of us in the coming year as a Department, each of them ties directly back to the heart of our mission: ***To manage and protect the fish, forest, and wildlife resources of the state and to provide opportunities for all citizens to use, enjoy, and learn about those resources.*** It is thanks to you, and countless other Missourians, who have worked hard to conserve the rich outdoor resources we now enjoy. I hope you will take time this year, no matter what your resolutions, to enjoy Missouri's rich conservation legacy in your own unique way. There are so many opportunities waiting for you to learn, explore, and discover nature.

Happy New Year!

A handwritten signature of Robert L. Ziehmer in black ink.

Robert L. Ziehmer, director

FEATURES

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by Jim Low

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Cover: A bobcat stays alert in early morning.

Photograph by Noppadol Paothong. Read about the lure of trapping starting on Page 10.

📷 70–200mm lens • f/4.0 • 1/200 sec • ISO 100

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WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on Page 7.



ANGLER APPRECIATION

I was amazed by Kevin Richards' *Hooked on Old Wooden Fishing Lures* [December]. The article was like one of those old aluminum fishing boxes packed full of fishing lure history, like a stringer full of keepers. The photographs were among the best I've seen, and I've been writing fishing articles for decades for some of the best fishing magazines in the world. This is the reason I always do a little dance for joy every time I find a new issue of *Missouri Conservationist* in my mailbox.

John Smelcer, Kirksville

Loved Mark Van Patten's article *Fly-Fishing — It's Not Just for Trout* [November]. Here are a few I target that others might want to know about:

Carp: Silver and bighead carp are good fly targets where they congregate. Small wooly boogers, streamers, and wooly worms all work

for them. Black carp hit mosquitoes on the surface like trout.

Sauger and walleye: Eyed flies like closers and eyed wooly boogers. I catch lots up the smaller creeks in northeast and central Missouri, and below dams.

Drum: Smaller white or yellow streamers, zonkers, and on small chenille bugs fished under an indicator. Fish rocks in current. Usually also catch catfish along with them.

Skipjack herring: A wide variety of minnow flies, wooly boogers, or sim. White bass are usually caught along with them on the same flies.

Bryce I. Meyer, O'Fallon

I learned how to use a fly rod catching "pumpkin seeds" on the Meramec River near Salem before fly-fishing for trout at Montauk. In the spring, when crappie are "on the banks" at Lake of the

Ozarks, I like to roll-cast the banks with a mini jig. The crappie are usually in 2 to 3 feet of water and it's quite possible to have a 100-fish day. Of course, you can only keep your daily limit for eating. In the summer, when the white bass are surfacing for shad, a fly rod with a white streamer that imitates the shad will get you some real thrills. Have some backing on your fly line as these fish are fired up when they are chasing shad and there may be a hybrid in the school that will give you a run for your money.

Lawrence Schlipp, Lebanon

In the September issue, the article *Fish Giggling: An Ozark Tradition* brought back many memories from the 1940s. But we had no boats, waders, hip boots, or waterproof gear so we waded all the rivers and creeks in St. Francois and Madison counties. There were times in October and November that I thought I would never again be warm.

Our dads were miners and the gigs were made in the St. Joe machine shop with "charging sticks" for gig poles. Our lights were carbide miners' lights that we modified by installing a Model T headlight reflector from Fox Junk Yard. The Model T headlight was larger than the carbide light, and it was brass when polished. Brass would not reflect back into your eyes from the water surface like the silver reflector that came on the light originally.

Ted Henderson, via Internet



Reader Photo

SNOW BEAUTIFUL

Ruth Bess, of Bloomfield in Stoddard County, captured this image of snow at Duck Creek Conservation Area. Bess says she visits the area a couple of times a year. "On this day, my husband, brother, sister-in-law, and I were just out looking at the snow; sightseeing," said Bess. "We were hoping to see things to take pictures of, and this time some were pretty good!" Bess said her family enjoys fishing and deer and turkey hunting, and they visit various natural areas in the area. "It is easy for everyone to dislike a bad winter," said Bess, "but, if you go out and look around, it can be beautiful."

CORRECTIONS

In the November "News & Events" section, *Wild Turkey Brood Survey Shows Continued Progress* contained an incorrect Web address. The results of the 2014 wild turkey brood survey, as well as other turkey reports, are available at mdc.mo.gov/node/3624.

In the December "Ombudsman" column [Page 5], the response to the question: "Is winter trout fishing catch and release only?" should have been: It depends upon where you are fishing. We provide a number of different trout fishing opportunities. The Winter Trout Fishing Areas, which begin as catch-and-release, allow harvest after Jan. 31. The trout parks have their own winter catch-and-release season. Check the regulations for the area you are fishing at mdc.mo.gov/node/5603 or call the nearest regional office.



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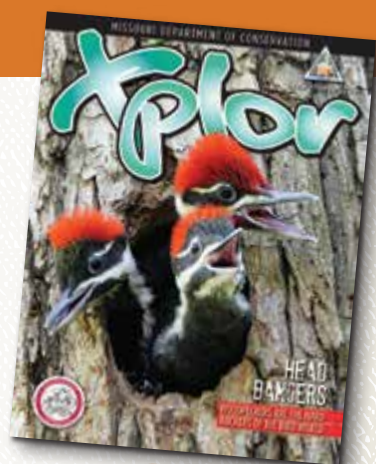
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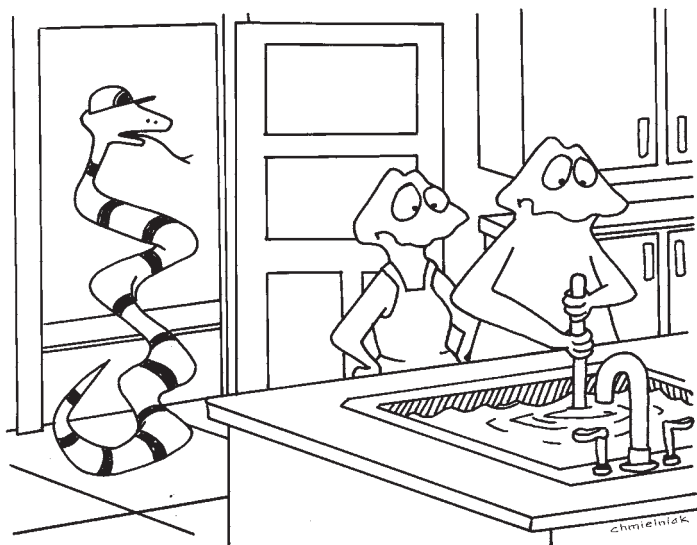
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"Did someone here call for a plumbing snake?"

Agent Notes

The Cure for Cabin Fever

IF YOU'RE LIKE many people who get the winter blues every January, go outside! Studies have shown that increased exposure to sun and fresh air in the winter can improve your mood and your health. Missouri winters are a great time to get children outdoors because there are so many things to do.



If it is an exceptionally cold winter, give ice fishing a try. The best and safest way to get started is to go with an experienced ice angler. If there is no ice, you can still wet a line in a public trout pond stocked annually by the Department. There are also many trout streams that offer excellent winter trout-fishing opportunities.

January is a prime time to hunt and trap. Small game species and furbearers are still active this time of year and provide an exciting reason to get out into the chilly air.

Even a nature walk can give you the recommended dose of outdoor activity. Birds are active during the day, especially around feeders and open water (be on the lookout for bald eagles!). If there is snow on the ground, look for animal tracks. Find out where they go, and you may discover their maker.

Get outside and see what winter has to offer.

Tyler Green is the conservation agent for Knox County. If you would like to contact the agent for your county, phone your regional conservation office listed on Page 3.

HUNTING & FISHING CALENDAR

FISHING	OPEN	CLOSE
Black Bass from Ozark Streams	05/24/14	02/28/15
Nongame Fish Giggling	09/15/14	01/31/15
HUNTING	OPEN	CLOSE
Coyote	05/12/14	03/31/15
Crow	11/01/14	03/03/15
Deer		
Archery	11/26/14	01/15/15
Firearms		
Alternative Methods Portion	12/20/14	12/30/14
Late Youth Portion	01/03/15	01/04/15
Pheasant		
North Zone	11/01/14	01/15/15
Quail		
Regular	11/01/14	01/15/15
Rabbit	10/01/14	02/15/15
Squirrel	05/24/14	02/15/15
Turkey		
Archery	11/26/14	01/15/15
Waterfowl	see the <i>Waterfowl Hunting Digest</i> or mdc.mo.gov/node/3830	

TRAPPING	OPEN	CLOSE
Beaver and Nutria	11/15/14	03/31/15
Furbearers	11/15/14	01/31/15
Otters and Muskrats	11/15/14	02/20/15

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, *The Spring Turkey Hunting Regulations and Information*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest*, and the *Migratory Bird Hunting Digest*. For more information, visit mdc.mo.gov/node/130 or permit vendors.

Operation Game Thief

Help put game thieves out of business. If you see a possible violation in progress, call your county conservation agent immediately or dial the toll-free number below:

1-800-392-1111

All information is kept in strict confidence. Desirable information includes names of violators, vehicle description and license number, as well as the violation location.

ASK THE Ombudsman



Q. As a new landowner, I am curious about prescribed burns. How would this help my property?

People are sometimes fearful of fire, especially when it comes to their property. However, the careful use of prescribed fire, or using fire to meet desired land management objectives, can actually improve your land's health and increase your property value. Fire rejuvenates open areas to create lush and healthy grasslands, improves habitat for many wildlife species, and even boosts pasture productivity. It's also a cheaper way to manage vegetation than mowing. Safety is paramount with prescribed burning, which is why the Department hosts free prescribed-burn workshops starting in

early spring around the state. For a listing of those workshops, visit mdc.mo.gov/events or contact your regional office (See Page 3 for phone numbers) to learn more.

Q. I love to watch wildlife in my backyard! What can I do to help wildlife over the winter?

By providing sources of food, water, and cover, you can turn your yard into a lively place full of fun-to-watch Missouri wildlife, even in the winter. In the winter months, provide high-fat suet and sunflower seeds for songbirds. High-fat food sources help the birds to

build up their energy sources. You can also provide warm water on a daily basis to save animals from using their energy to search for unfrozen water sources, but be sure to replenish the water daily. Fallen trees or larger limbs in your yard make a great place for wildlife to shelter from the wind and elements. Visit mdc.mo.gov/node/3319 for more details.

Q. If my kids and I are on a hike, can we keep any antlers we find on the ground?

Winter hiking can become an adventure for the whole family when searching for shed antlers. White-tailed bucks lose their antlers from early January to early spring (which is why they are called "shed antlers"), but they can be challenging to find after weather fades them. No permit is needed to find or possess shed antlers as long as they are not attached to a skull plate. If you do find antlers attached to a skull plate while afield, and you take those antlers into possession, you must report the taking to a conservation agent within 24 hours to receive possession authorization. Department conservation areas are a great place to hike and look for shed antlers, but be sure to ask permission prior to searching for antlers on private property. To find conservation areas near you, visit mdc.mo.gov/atlas.

Note to readers: The ombudsman position is currently vacant, but please continue to send us your questions, suggestions, or complaints concerning the Conservation Department or conservation topics.

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Fall Turkey Harvest Tops 5,000

Hunters checked 5,691 turkeys during Missouri's fall firearms turkey season Oct. 1 through 31. Top harvest counties were Greene with 165 turkeys checked, Franklin with 163, and St. Clair with 160. Adult gobblers accounted for 964 of

the harvest, or almost 17 percent. Adult hens accounted for 1,588 of the harvest, or almost 28 percent. Juvenile gobblers accounted for 950, or almost 17 percent, and juvenile hens for 2,189 or about 38 percent.

- The **Central Region** of the state saw about an 8 percent increase in harvest from 2013 with 759 birds.
- The **Kansas City Region** dropped about 1 percent from 2013 with 681 birds.
- The **Northeast Region** dropped about 3 percent from 2013 with 588 birds.
- The **Northwest Region** dropped about 13 percent from 2013 with 477 birds.
- The **Ozark Region** dropped by about 9 percent from last year with 784 birds.
- The **St. Louis Region** harvest increased by about 9 percent from 2013 with 528 birds.
- The **Southeast Region** fell by about 15 percent from last year with 687 birds.
- The **Southwest Region** dropped by about 4 percent from 2013 with 1,187 birds harvested.

Fall archery turkey hunting continues through Jan. 15. For fall firearms turkey harvest results by county and type of bird, and other 2014 turkey harvest figures, visit mdc.mo.gov/node/27845.

Help Us Improve Our Communications

The role of communications is a critical part of what we do at the Missouri Department of Conservation. We have millions of Missourians with varied backgrounds, interests, and levels of engagement with conservation. The Department is conducting a communications audit to determine the best way to share with Missourians about Conservation priorities and activities happening around the state.

How do we know if our communications are effective? How do we gauge our current strengths and, more importantly, our biggest opportunities for improvement and growth? We start with an audit of our communications.

Getting feedback and opinions from Missouri conservation enthusiasts is one of the most important things we do, and we hope you will participate in this audit. Your comments will help determine the best ways for the Missouri Department of Conservation to communicate with Missouri residents. We need your honest opinions.

Go to talktoMDC.com to give us your feedback. This link will only be active for a limited time, so please get your responses in early. We appreciate your participation in this very important project.

Director Ziehmer Named to Blue Ribbon Panel

Johnny Morris, founder and CEO of Bass Pro Shops, and former Wyoming Governor Dave Freudenthal have named Conservation Department Director Robert L. Ziehmer and 21 other members to the national Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources.

Morris and Freudenthal, the Blue Ribbon Panel co-chairs, announced the appointments during a keynote address at the 2014 Annual Meeting of the Association of Fish & Wildlife Agencies in St. Louis. The Blue Ribbon Panel includes representatives from the outdoor recreation, retail and manufacturing sectors, the energy and automotive industries, private landowners, educational institutions, conservation organizations, sportsmen's groups, and state fish and wildlife agencies. The panelists will work together over the course of a year to produce recommendations and policy options on the most sustainable and equitable model to fund conservation of the full array of fish and wildlife species.

Members of the Blue Ribbon Panelists on Sustaining America's Diverse Fish & Wildlife Resources include:

- **Robert L. Ziehmer**—director, Missouri Department of Conservation
- **Kevin Butt**—general manager and chief environmental officer, Toyota Motor Engineering and Manufacturing North America Inc. and board member, Wildlife Habitat Council
- **Jeff Crane**—CEO, Congressional Sportsman's Foundation
- **John Doerr**—president and CEO, Pure Fishing Inc. and board member, Theodore Roosevelt Conservation Partnership and the Recreational Boating & Fishing Foundation
- **Jim Faulstich**—owner, Daybreak Ranch and vice chairman, Partners for Conservation
- **John Fitzpatrick**—director, Cornell Lab of Ornithology and co-inventor, eBird
- **Gregg Hill**—president and CEO of Exploration and Production, Hess Corporation
- **Rebecca Humphries**—chief conservation officer, National Wild Turkey Federation

- **Dr. Stephen Kellert**—professor emeritus of social ecology and senior research scholar, Yale University School of Forestry and Environmental Studies and board member, Bio-Logical Capital; founding partner, Environmental Capital Partners
- **Jennifer Mull**—chief executive officer, Backwoods Equipment Inc. and board chair of the Outdoor Industry Association
- **John W. Newman**—CFO and treasurer, LLOG Exploration Company LLC and board chairman, Ducks Unlimited
- **Margaret O'Gorman**—president, Wildlife Habitat Council and board member, Stewardship Action Council
- **Glenn Olson**—Donal O'Brien chair in Bird Conservation and Public Policy, National Audubon Society and member, North American Wetlands Conservation Act Council and the Neotropical Migratory Bird Conservation Act Advisory Council
- **Collin O'Mara**—president and CEO, National Wildlife Federation



WHAT IS IT?

Rainbow Trout | *Oncorhynchus mykiss*

On Page 1 are rainbow trout hatchlings spawned at Shepherd of the Hills Fish Hatchery in Branson. Rainbow trout require waters that are constantly below 70 degrees Fahrenheit, so they are limited to Ozark spring branches, spring-fed streams, and Lake Taneycomo, where cold water flows from the lower levels of Table Rock Reservoir. Although small, self-sustaining populations have been established in some streams, most populations are maintained by continuous stocking. Trout raised in the hatchery grow faster than those in the wild, reaching 10 inches their first year. Hatchery brood stock spawn in October and November, whereas wild trout in Ozark springs spawn in late December through early February. In nature, the female digs a shallow pit on clean, gravelly riffles, fanning it hard with her tail. One or more males fertilize the eggs as they are shed. The female resumes digging upstream, covering the eggs by gravel carried by the current. No parental care is provided. Rainbow trout eat a variety of animal life, such as aquatic insects, terrestrial insects, snails, and small fishes. —*photograph by David Stonner*

(continued from Page 7)

- **Connie Parker**—CEO and founder, CSPARKERGROUP and board member, Theodore Roosevelt Conservation Partnership and the Wildlife Foundation of Florida
- **Charlie Potter**—CEO, Max McGraw Wildlife Foundation, and founder and chairman, Great Outdoors LLC
- **Steve Sanetti**—CEO, National Shooting Sports Foundation
- **Lynn Scarlett**—managing director, Public Policy, The Nature Conservancy
- **John Tomke**—president, Ducks Unlimited
- de Mexico and chair, Wildlife and Hunting Heritage Conservation Council
- **Dr. James Walker**—vice chairman of the board, EDF Renewable Energy and board member, American Wind Energy Association
- **Dr. Steve Williams**—president, Wildlife Management Institute and board president, National Conservation Leadership Institute; board member, National Fish and Wildlife Foundation

"Conservation means balancing the sustainability of fish and wildlife with the many needs

of humans for clean air and water; land; food and fiber; dependable energy; economic development and recreation," said Morris. "By assembling this panel of highly regarded leaders and problem solvers, we will find a way forward that safeguards not only vital natural resources, but also our nation's economic prosperity and outdoor heritage."

"With fish and wildlife species and natural resource-based enterprise at stake, we can't afford an 'us vs. them' mentality," said Freudenthal. "It is time to create certainty for both industry and the conservation community by building a 21st century funding model."

State hunting and fishing license dollars, federal excise taxes on hunting and fishing gear, and motorboat fuel taxes have provided the backbone for funding states' fish and wildlife conservation programs over the past century. However, there has always been a significant gap in dedicated funding for conserving the 95 percent of all species that are neither hunted nor fished.

Only partially filling that gap is the State and Tribal Wildlife Grants Program, the sole federal source of funding to state agencies to prevent new endangered species listings. Since 2010, the program's funding has been cut by more than 35 percent while petitions for federal endangered species listing has skyrocketed by 1,000 percent.

"Dedicated funding allowing for the management of all fish and wildlife, whether game or nongame species, is essential for this nation," said Bob Ziehmer, Missouri Department of Conservation director and representative for state fish and wildlife agencies on the Blue Ribbon Panel. "Many species are declining in abundance and will continue to do so if we don't work toward establishing a sustainable funding source for our nation now and into the future."

The Association of Fish & Wildlife Agencies began its quest to secure sustained funding for fish and wildlife diversity conservation in the early 1990s. The launch of the Teaming With Wildlife coalition, which now includes nearly 6,400 organizations, was a critical step in demonstrating broad and diverse support for dedicated fish and wildlife funding.

The co-chairs expect to add approximately three more individuals and four Ex Officio participants to the Panel before it convenes its first meeting in early 2015.



November Deer Harvest up 6 Percent

Building on a strong opening weekend harvest, Missouri hunters went on to check a total of 167,205 deer during firearms deer season Nov. 15 through 25. The number exceeds last year's harvest of 157,273.

The Missouri Department of Conservation reports the top harvest counties were Howell, with 3,418 deer checked; Franklin, with 3,338; and Texas, with 3,170.

This year's harvest is 6 percent larger than last year's figure and 10 percent below the previous 5-year average for the November portion of firearms deer season. When added to the previous urban and early youth portions of this year's firearms deer season, the November portion harvest brings the year-to-date total to 185,890. Archery deer season runs through Jan. 15.

The white-tailed deer is Missouri's most popular game species. Missouri has nearly 520,000 deer hunters and almost 2 million wildlife watchers who enjoy deer.

Activities related to deer hunting and watching annually contribute \$1 billion in economic activity to state and local economies, and they support more than 12,000 Missouri jobs.

DID YOU KNOW?

Conservation education enriches our quality of life.

Missouri National Archery in the Schools (MoNASP) Program

» **What is MoNASP?** The Missouri National Archery in the Schools Program is modeled on the National Archery in the Schools Program, which began with a simple idea — teach kids the basics of archery as a part of school curriculum. Since NASP's beginnings in 2002, millions of kids across the nation have participated in the program.

» **Why does it work?** Nearly everyone — regardless of age, size, or physical ability — can succeed at archery. Kids love archery, and archery helps kids excel. Statistics show that school archery programs improve attendance, increase self-esteem and physical activity, help kids relate better to subject matter, and get kids outdoors.

» **How does it work?** Missouri National Archery in the Schools Program supports international-style target archery in 4th- through 12th-grade physical education classes during the school day. The Department offers schools new to MoNASP a \$1,500 equipment-reimbursement grant to help get started in the program.

» **Who is participating?** For the school year of 2014–2015, more than 125,000 students in grades 4 through 12 are participating in MoNASP during the school day in over 450 Missouri schools. Last year, more than 1,200 students qualified for and participated in the State MoNASP Tournament held in March.

» **What do Missouri students think of MoNASP?** “What I love about archery is you get to shoot bows and arrows in gym class. It's a lot of fun!” says Jordan Lewis, MoNASP student.

» **How do I learn more?** Visit mdc.mo.gov/node/3409, or call MoNASP coordinator Eric Edwards at 573-522-4115, ext. 3295.

To learn more about AFWA's Blue Ribbon Panel on Sustaining America's Fish and Wildlife Resources, visit fishwildlife.org/blueribbonpanel and fishwildlife.org/index.php?section=press-room7&prid=267#sthash.wev668s6.dpuf.

Order Tree Seedlings Now

Winter is prime time for planning habitat-improvement projects, and George O. White State Forest Nursery now offers more flexibility than ever in ordering seedlings for wildlife plantings. As always, the Conservation Department's nursery at Licking has a wide variety of tree and shrub species. This year's offerings include 14 oak species, seven evergreens, black walnut, pecan, tulip poplar, bald cypress, persimmon, four dogwood species, wild plum, ninebark, witch hazel, black chokeberry, redbud, and much more. Prices range from 16 cents to 80 cents each, depending on species, size, and quantity. Seedlings are available in bundles of 10 or 25, as they were last year. The catalog and order form are easy to find at mdc.mo.gov/node/4011. To see how the nursery grows your quality bare-root seedlings, attend their open house and tour the facility from 9 a.m. until 3 p.m. April 4. Please call 573-674-3229 to order a catalog or reserve a time for the tour, as space is limited.

Discover Nature Schools Goes to the Fair

Recognition for outstanding nature-related science fair projects is available again this year through the Discover Nature Schools (DNS) program. No extra work or travel are involved. Teachers simply email photos and descriptions of projects for judging. Winners receive ribbons, medals, or plaques for their achievements, and four state winners will receive classroom equipment used to deliver DNS at their school.

Teachers, not students, must submit entries for the DNS Science Fair competition. Submission criteria have been simplified and shortened this year. To qualify, students must be enrolled in a class teaching a science unit that is part of the Conservation Department's DNS. Entries must show a connection to at least one DNS activity. DNS does not have to be mentioned in the project. However, entries must meet criteria for display rules and safety guidelines listed on the

Academy of Science-St. Louis Science Fair website, sciencefairstl.org.

The competition takes place in three rounds. Round 1 is judged by teachers at participating schools. Teachers submit winning entries for Round 2 by March 15. Conservation Department education consultants judge Round 2 and send winners on to Round 3, which is judged at the Conservation Department's Central Office in Jefferson City by May 1.

The Discover Nature Schools program is taught in nearly 90 percent of Missouri school districts, and the program continues to grow every year. To view submission criteria for the DNS Science Fair and download an entry form, visit mdc.mo.gov/node/19569.

2013 Conservation Opinion Survey

In 2013, a statistically valid survey of Missouri adults was conducted for the Department of Conservation by a team from the University of Missouri. Results from the survey include information on Missourians' interests and participation in forest, fish, and wildlife activities and conservation issues. The survey has been conducted about every 10 years since 1980. Missouri households were randomly selected to receive the survey questions. Results from the survey are used to guide management, regulations, and to meet expectations of Missourians for conservation. If you responded to the survey, thank you! Look for more information on this survey in the February *Conservationist*.



THE LURE OF TRAPPING

BY JIM LOW

Engaging with nature, nuisance-wildlife control, and pride are just some of the reasons these Missourians love to trap

OF ALL MISSOURI'S WILDLIFE-BASED ACTIVITIES, TRAPPING is perhaps the least understood. Why would anyone wade in icy water to catch furry animals, then devote weeks to preparing hides, all for a few dollars per pelt?

The reasons people trap are as varied as trappers themselves. Missouri's more than 11,000 trappers include farmers, schoolteachers, doctors, veterinarians, preachers, businessmen, and homemakers. Some are lured by direct, intimate engagement with nature. Others love the challenge of matching human wits against furbearers' keen survival instincts. For a few, trapping is part of full-immersion outdoor careers that blend hunting, fishing, guiding, foraging for botanicals such as ginseng, and other traditional skills. Trapping during Christmas break has provided much-needed cash for more than a few college students.

The practical reasons for trapping extend beyond personal rewards. Trappers provide a vital check on furbearer populations that otherwise would become too numerous, leading to die-offs from distemper and other diseases. Trapping is the only economical way of dealing with the problems that arise when fur-bearing animals become nuisances. Ranchers who lose livestock to coyotes, homeowners whose attics are invaded by raccoons, and farmers whose fields are inundated by overambitious beavers all benefit from the services of trappers.

Trapping doesn't merely prevent economic losses, though. During the 2012–2013 trapping season, Missouri trappers brought in pelts worth approximately \$3 million. The Conservation Department monitors annual

harvest figures to ensure that the activity remains sustainable. The activity may temporarily become more profitable when furbearer numbers surge, but abundance inevitably drives down pelt value. The less furs are worth, the fewer the trappers willing to invest the time and money needed to harvest them.

Let's meet a few Missourians who love trapping for fun and profit.

Conibears and Rhinestones

Leslie Bruner-Thresher doesn't fit the mold of the weathered, wiry, middle-aged, male trapper. Her trapping jeans are adorned with rhinestones. So are her fashionable sunglasses. She's got a 10,000-watt smile that alternates with expressions of intense concentration as she checks and resets traps.

She beams when she hoists a No. 330 Conibear (a body gripper-type trap) holding a hefty beaver out of a ditch up onto the bank. That's no small feat for someone who stands about 5-foot-nothing. Did I mention that Leslie is a middle school PE teacher and makeup sales rep? Not your typical trapper by a long shot.

Leslie's interest in trapping started in a deer stand. She had always wanted to shoot a bobcat and have it mounted, but she never got the chance. One day a friend suggested that trapping might be a shortcut to the taxidermist. Bobcats remained elusive, so she branched out. Beavers, which plug up drainage ditches, pose a perennial problem for farmers around her Mississippi County home. Conservation Department Wildlife Damage



Biologist Tom Meister showed Leslie the ropes, and she was off and running with husband, Brent, and their son, Lawson, in tow.

Lawson is learning the trade alongside his mom and loves to go with her when she runs her trap line after school. Brent doesn't trap, but he often accompanies the dynamic trapping duo on outings.

Leslie ended her first trapping season with 39 beavers, one muskrat, three raccoons, one coyote, and five opossums. Lawson's tally included three raccoons and two opossums. The last time I saw them was at a fur-tanning workshop at the Cape Girardeau Conservation Nature Center. When she finally bags her bobcat, Leslie will be ready to turn it into a décor item.

Full-Bore Trapping: The Perfume Connection

Tim Reed has been trapping for 33 of his 48 years, thanks to an uncle who introduced him to the pursuit. When

Left: Leslie Bruner-Thresher traps beaver near her home with her son, Lawson. Above: Leslie works on a coyote at a fur-tanning workshop in Cape Girardeau.

Tim got married, he realized he needed to get serious about a career that would produce a reliable, substantial income. He was good at trapping and loved it, so that's the direction his career took. Today, trapping accounts for about three-quarters of his annual income.

Tim begins trapping in Iowa early in the fall, then moves south when Missouri's 4.5-month trapping season opens. When trapping season ends here, he moves south to Tennessee and Arkansas, where beaver dams cause flooding on roads and cropland.

Tim reaps a further bonus that some less-experienced trappers neglect. When he skins a beaver, he also

How much would you give fur that?

During the 2012–2013 trapping season, pelt prices in Missouri ranged from \$1.25 for opossum to \$115.50 for bobcats. The average auction price for

raccoon pelts — which made up approximately three-quarters of the harvest — was \$20.79. Other highly valuable pelts included river otter (\$85.53), red fox (\$39.13), gray fox (\$34.72), mink (\$26.72 for male pelts), coyote (\$22.26), and

beaver (\$21.72). These prices are relatively high compared to the long-term average, thanks in part to demand for fur in China. How many sectors of the United States' economy do you know where exports outweigh imports from China?



Tim Reed sets traps along the backwaters and tributary streams of the Missouri River in St. Charles County. He has been trapping for more than 30 years.

removes the animal's castor gland. This sac contains an oily substance that beavers use to scent-mark their territories. When dried, castor glands are worth an average of \$7, adding substantially to a trapper's profit margin. Buyers in turn sell the glands to perfume manufacturers in France and elsewhere. Castoreum derived from the glands is used in making many perfumes.

I met Tim at the Blanchette Landing Access on the Missouri River in St. Charles County around 8 a.m. on a clear mid-January day. Because the weather was supposed to turn bad that afternoon, Tim had only set 44 traps. We headed downriver, motoring into backwaters and tributary streams where he had sets. As the morning wore on, the front of the boat where I was perched quickly filled up. Tim skinned the beavers he caught to avoid overloading the boat. Even so, the seven beaver pelts and 17 raccoons he caught that day added 300 or 400 pounds to our load. I doubt he could have afforded to bring a passenger if he had been running 100 traps.

The depth of Tim's knowledge of trapping and the animals he pursues was obvious. Walking across a

seemingly featureless riverbank, he pointed out subtle signs of raccoon traffic, noted clues to beaver and river otter activity, and gave me a short course in furbearer behavior. One of the beaver lodges where he had traps looked abandoned. When I mentioned this, Tim pointed to a pile of little green twigs neatly stacked near the base of the lodge.

"That's a food cache for when ice makes it hard to forage outside," he said. "And do you see those two lines of bubbles leading away from the lodge under the ice? Those point right to the entrances."

Sure enough, each of the Conibear 330 traps set on the runs had a young, 35-pound beaver in it.

Land Sets: Coyotes And Bobcats

Mark Wilcoxon was just 14 when he met a trapper while hunting squirrels in Wayne County. The man had a fox in a trap, and Mark got to watch how the grizzled veteran removed the prize from the trap without damaging its



Mark Wilcoxon covers a land trap with peat moss and dry grass (left) and resets after a successful trap (above). Mark pursues mostly coyotes, bobcats, skunks, and foxes.

pelt. After visiting with the seasoned trapper, Mark was so intrigued that he set out to learn the trapper's trade.

Mark is a dry-land trapper, pursuing mostly coyotes, bobcats, skunks, and foxes. His home area around Van Buren has lots of trapping opportunities, and he likes the challenge.

"Land trapping is like baseball," he says philosophically. "You have to accept a lot of failure."

Running a line of 80 to 100 traps scattered a quarter to half a mile apart along deeply rutted two-tracks in the middle of nowhere provides plenty of time for philosophizing. It also has given Mark a deep understanding of the behavioral quirks of some of Missouri's cagiest animals.

Creating an effective land set requires skilled crafts-

manship. First Mark examines the area for natural travel corridors. He uses these to make walk-through sets to catch animals making their normal rounds. If no obvious paths exist, he creates a bait-hole set designed to lure an animal to the trap site.

With either set, he tries to take advantage of natural obstacles that force passing furbearers to take predictable steps. Where no such object is present, he creates one with "stepping sticks" pushed into the soil.

Next, he digs a hole and places bait, consisting of ground beaver meat mixed with bobcat scent gland, into the hole. In front of this hole, he removes leaves and other material to create a stable bed for the leg-hold trap. He covers the trap with peat moss and then a layer of dry grass. He carries these materials with him, since it might not be readily available at each trap site. Tree leaves are no good for this purpose. If leaves are captured with the target animal's leg, their slick surfaces can permit the animal to slip its leg free. (Traps must be made of metal with smooth or rubber jaws only and must not be set in paths made or used by people or domestic animals.)

Somewhere near the bait-hole set, Mark places a scrap of fur from a previously trapped animal and dabs it with bobcat scent. He anchors this lure to the earth with a small nail to prevent mice or other small animals from dragging it away. Finally, he sprays the set with bobcat urine to pique the interest of any bobcat that happens along.

On an average day, Mark might bring home five or six pelts. If two or three are foxes and bobcats, it's a paying proposition. And since the activity is its own reward, any cash it generates is a bonus.

The Craft: Fur Preparation

The real work of trapping has only begun once an animal is removed from a trap. To get an idea of what fur preparation involves, I spent some time with Clay Creech and Chris Chesher. Trapping is a natural fit for people who want to develop intimate knowledge of wildlife. Chris learned much of what he knows about trapping from Clay, who says he likes to trap alone but prefers to work with a partner when "working up" furs. One partner can skin carcasses and stretch hides while the other fleshes them.

Fur care begins the moment an animal is removed from the trap. To maximize time gathering furs, Clay freezes most of his catch and prepares the furs after the season closes or on days when trapping is impossible.

When done properly, fleshing removes all traces of muscle, fat, and gristle. This requires a curved, two-handled fleshing knife with a rounded fleshing board that holds the pelt. The dull side of the knife is used to scrape away fat and loose flesh, while the sharp edge is used to shave off muscle and gristle that are more tightly attached.

The area from the ears to the middle of the back is the most difficult part to flesh. The armpits and bellies are the most fragile areas, requiring a deft hand to avoid creating cuts or tears that decrease the pelt's value. As he painstakingly trimmed the areas around the eyes, nose, and mouth of a raccoon pelt, Clay said, "There's a lot of pride in taking a big load of fur that you benched yourself, from beginning to end, with all of them looking pretty, to auction."

A skilled trapper can flesh about four raccoon hides in an hour. Asked what were the most hides he had ever fleshed at one time, Clay rolled his eyes as if the memory was painful and said, "I fleshed 45 coons in one day. That was a long day."

After skinning, Clay freezes raccoon carcasses and sells them to a buyer from Mississippi, who sells them to clients for whom the meat is a delicacy. A buyer in St. Louis takes some of his beaver carcasses for the same purpose. Left-over meat becomes bait for traps. Beaver,



Trapping is both equipment- and labor-intensive. A skilled trapper can flesh about four raccoon hides in an hour.

otter, and raccoon skulls are sold to people who use them in hand-crafted décor items.

Trapping is both equipment- and labor-intensive. Clay has approximately 750 traps, including 400 small body-gripping traps for muskrat, 50 big body-gripping traps for beavers, 250 dog-proof traps for raccoons, and 50 or so leg-hold traps. These cost \$10 and up, but they last forever if properly maintained. Leg-hold traps made in the 1930s are still in use. ▲

Jim Low has been writing press releases for the Conservation Department since 1990. His first Conservationist article, about the hognose snake, appeared in 1978. His other credits include Outdoor Life, Birder's World, Reptile & Amphibian, and Australian Birding magazines.

And the Winners Are ...

ELEVEN
EYE-POPPING,
HEART-WARMING,
AND RIB-TICKLING
DISCOVER NATURE
PHOTOS



JANUARY WINNER

Rob Tweddle snapped this dramatic winter sunset at August A. Busch Memorial Conservation Area in St. Charles County.

FEBRUARY WINNER

Derek Eisenhart got a crisp shot of this white-throated sparrow at Forest 44 Conservation Area in St. Louis County.



From January through November of 2014, Missourians responded to our Discover Nature Photo Contest with hundreds of images. At the end of every month, we scrolled through our photo stream to choose that month's winning image. It wasn't easy. The photos were diverse, but they all portrayed a moment of discovering nature or enjoying Missouri's great outdoors — dramatic or funny wildlife shots, scenic views, proud hunting and

fishing moments, and close-ups of tiny insects.

The grand prize for winning the Discover Nature Photo Contest? Bragging rights for getting a great nature photo published in this issue of the *Conservationist*.

Congratulations to our 11 contest winners, and thanks to everyone who participated in helping others get outside and discover nature!

Want to see all the contest entries? Visit mdc.mo.gov/node/26255.



**MARCH
WINNER**

Sharon Chambers
caught this gray
squirrel peeking
out of a hollow
tree in Parkville
in Platte County.



MAY WINNER

Mary Knaebel snapped this
red fox catching her scent on
the air in Randolph County.



APRIL WINNER

Ten-month-old Simon helped mom, Rosalie Dear, scout out this 9-and-a-half-inch yellow morel in Warrensburg in Johnson County.





JUNE WINNER

Shirley Scrivner of Russellville in Cole County photographed these two young barred owls, who she thinks may have been discussing dinner.



JULY WINNER

Crystal Shoults of Osage County photographed this mourning cloak butterfly in her backyard.



AUGUST WINNER

Using her car as a blind, Christina Laws took more than 1,000 photos to capture this dramatic shot of two male great egrets fighting for territory at Clarence Cannon National Wildlife Refuge in Pike County. Christina loves it when her photos inspire people to explore Missouri's great outdoors.

SEPTEMBER WINNER

Lisa Hostetter saw this spider's work below her deck in Waverly in Lafayette County just in time to avoid walking into it. "I hate walking into these face first!" she says.

Keep sharing the love

Our Discover Nature Photo Contest is over, but you can still share your photos with *Conservationist* readers and fellow nature lovers in three easy ways.

- 1. Monthly reader photos.** Submit your photos for consideration using one of the methods listed on Page 3.
- 2. Our Flickr bragging board.** If you have a big fish, deer, or other game you want to brag about, post your photos at [flickr.com/groups/mdcbragboard](https://www.flickr.com/groups/mdcbragboard).
- 3. #MDChashtags.** Tag your photos on your favorite social networking sites, such as Google+, Instagram, and Twitter.
 - Share your favorite nature and outdoor activity photos with **#MDCdiscovernature**.
 - Share the photos you take at conservation areas with **#MDCarea**.
 - Share the great time you had at an MDC-sponsored program with **#MDCevent**.
 - Share photos of your big buck or big fish with **#MDCbragboard**.
 - Finally, if you have a question for Department experts (and the citizen naturalists around the state), tag it with **#askMDC**.





OCTOBER WINNER

Doug Mitchell photographed this chorus frog perched on a hickory leaf in fall color near the University of Missouri's Southwest Research Center just west of Mt. Vernon in Lawrence County. Doug takes nature photos to inspire people to go outside.

NOVEMBER WINNER

This groundhog stopped in its tracks when it saw John Foehner with his camera near Lake of the Ozarks in Camden County. "Photography is a great way to enjoy nature and has helped me be aware of the natural world even when I'm not carrying a camera," John says.



Fiscal Year 2013–2014

ANNUAL REPORT



This Annual Report summary highlights the Missouri Department of Conservation's accomplishments and expenditures from July 1, 2013, through June 30, 2014. These accomplishments are based on the Department's five main goals. Not only does this summary highlight the accomplishments of the Department, but it emphasizes that Missourians care about conserving forests, fish, and wildlife; that we work with Missourians and for Missourians to sustain healthy forests, fish, and wildlife; that we help people discover nature; that conservation makes Missouri a great place to hunt and fish; and that conservation pays by enriching our economy and quality of life.

HEALTHY FORESTS, FISH, AND WILDLIFE

Elk Restoration

The purpose of the Elk Restoration Project was to establish a herd of elk within a pre-determined area of the Ozarks in southeastern Missouri. Relocation began in 2011 and was complete in 2013 with a total of 111 elk from Kentucky released on Peck Ranch Conservation Area. The population is currently estimated at 125 animals, with a long-term goal of 400 to 500. The elk are slowly expanding their range and elk viewing continues to be popular with the public. The Department continues to work with landowners in the Elk Restoration Zone to make habitat improvements that benefit elk and other wildlife.

Quail Habitat and Population Monitoring

The Department had three important quail monitoring initiatives in fiscal year 2014. In addition, the state quail plan and regional quail plans were updated. This effort was led by the Quail and Small Game Task Force, and it resulted in a plan that will serve as a guiding document to improve habitat for quail and many species of wildlife into the future, on both public and private land.

- **National Quail Monitoring Pilot:** Missouri is one of seven states in the nation piloting a habitat and quail population monitoring system for quail focus areas.
- **Quail Forever Volunteer Monitoring:** In October, the Department partnered with Quail Forever volunteers to survey three additional focus areas around the state: Scott County Quail Focus Area, Stoddard County Quail Focus Area, and Cass County Quail Focus Area.
- **Bee Ridge Focus Area Monitoring:** The Department joined with private landowners and Quail Forever Whistling Bobs chapter members to monitor quail numbers on the Bee Ridge Focus Area in northeast Missouri.

Feral Hogs

The Department completed the second year of its Five-Year Feral Hog Operational Plan, eradicating 740 feral hogs by regional strike teams. Eleven of these hogs tested positive for hog-related diseases.

Wildfire Suppression

The Department worked with fire departments across the state to suppress 3,843 wildfires that consumed 40,392 acres and upgraded its network of remote automated weather stations with two satellite capable stations. In addition, six 20-person, interagency fire crews were sent to assist with fire suppression in California, Colorado, Utah, Oregon, and Idaho.



The Department completed the second year of its Five-Year Feral Hog Operational Plan, eradicating 740 feral hogs by regional strike teams.

Stocking Public Waters

- **Urban Fishing:** During 2013, 49 urban lakes were managed for fishing. A total of 118,290 keeper-sized fish were stocked in these lakes; this included 68,041 channel catfish and 50,249 rainbow trout.
- **Cold-Water Fish Hatcheries:** During 2013, cold-water hatcheries stocked 1,501,025 trout. These fish were distributed in four trout parks, 12 stream special management areas, and Lake Taneycomo. There were 302,932 daily adult and 61,277 daily youth tags sold at the trout parks. Anglers purchased 94,063 annual trout fishing permits.
- **Warm-Water Fish Hatcheries:** During 2013, 10.1 million fish were stocked in public waters. Fish stocked include hybrid striped bass, paddlefish, channel catfish, hybrid sunfish, and walleye.

Hellbender Restoration

The Department's Shepherd of the Hills Hatchery in Branson and the Saint Louis Zoo's Ron Goellner Center for Hellbender Conservation, with support from other agencies and private citizens, continue to work together to keep Missouri's largest salamander from extinction through cutting-edge efforts. Suc-

successful captive breeding of Ozark hellbenders occurred at the St. Louis Zoo for the third consecutive year, producing over 600 larvae. In addition, the zoo reared approximately 3,500 larvae and juvenile hellbenders. During the summer of 2013, 150 eastern hellbenders raised at the hatchery and 602 Ozark hellbenders raised at the zoo were released in their native Ozark rivers.

Furbearers and Trapping

During the 2013 fur harvest season, the Department sold more than 10,000 trapping permits, which is a 25-year high. The coyote harvest was the highest in 25 years. Participation by furbearer hunters has been increasing.

MANAGE LANDS IN PUBLIC TRUST

Public Input on Area Plans

Conservation area management plans document strategies for natural resource management and public use on conservation areas. The Department manages 956 properties (totaling nearly 1 million acres) statewide. In fiscal year 2014, staff drafted 128 plans that cover 239 conservation areas and accesses. For the first time, 47 area plans (covering 109 areas)

The skills session of the new Hunter Education program launched this year provides hands-on application of safe hunting practices.

were posted for public comment. Over 500 public comments were collected. Public review of area plans offers an important opportunity for Missourians to comment about the management of a specific conservation area.

Land Management

The Department maintained active management on Department lands for all wildlife and their habitats. This year, staff conducted habitat management on nearly 200,000 acres of public land. In addition, forest and woodland habitat improvements were conducted on 53,660 acres of state land.

State Forest Nursery

The State forest nursery annually grows and distributes close to 3 million seedling trees of more than 60 species. The seedlings include trees and shrubs suitable for reforestation and wildlife-habitat restoration. The seedlings are planted on both public and private lands statewide. The nursery filled more than 9,300 orders involving more than 20,000 packages of seedlings, with a customer satisfaction rate of more than 99 percent.

SOUND FINANCIAL ACCOUNTABILITY

Conservation Goals and Priorities

The Department developed goals and conservation priorities for fiscal year 2014 to serve as an annual strategic plan. The conservation priorities address the most important conserva-



RECEIPTS

Conservation Sales Tax	\$107,076,440
Permit Sales	\$33,044,656
Federal Reimbursements	\$27,945,766
Sales and Rentals	\$10,283,532
Other Sources	\$2,803,488
Interest	\$384,769
Total Receipts	\$181,538,651

tion challenges within the next three years. A brochure was prepared about the Department's mission, vision, goals, and priorities.

Internships Encourage Diversity

The Department began its 11th year of an internship program. Objectives are threefold: expose students to a variety of professional tasks and the Department's culture, mentor promising students in disciplines in which job candidates are scarce, and attract students with diverse cultural backgrounds to contribute to the Department's workforce. In fiscal year 2014, students from four colleges and universities interned.

CITIZEN INVOLVEMENT/EDUCATION

Hunter Education

A new Hunter Education program was launched this year. The two-session format includes knowledge and skills components. The knowledge session can be completed online, by self-study, or in a classroom. The skills session is taught by certified instructors and provides hands-on application of safe hunting practices.

Citizen Input on White-tailed Deer

Eight "Protecting Missouri's White-tailed Deer" public meetings occurred in fall 2013. A total of 695 people attended these public meetings, and the Department collected nearly 1,500 comments via comment cards and online. Deer Management Open Houses were conducted during summer 2014 to gather public input regarding possible white-tailed deer regulation changes such as season timing, bag limits, and archery methods. Nine of the 14 open houses were conducted during fiscal year 2014, reaching 841 people interested in deer management. There was also a virtual open house on the Department website providing the same information and opportunities to comment.

DISBURSEMENTS

County Assistance Payments	0.97%
Capital Improvements	8.38%
Information Technology	7.30%
Fisheries	8.20%
Forestry	10.80%
Wildlife	12.22%
Outreach and Education	9.77%
Private Land Services	5.22%
Protection	9.73%
Resource Science	6.99%
Regional Public Contact Offices	1.30%
Administrative Services	7.63%
Human Resources	1.46%
Design and Development	8.39%
Administration	1.64%

MISSOURI STATE BUDGET

Health and Social Services	45.4%
Education	27.1%
Government Services	15.3%
Transportation	8.6%
Natural and Economic Resources	3.0%
Conservation	0.6%
MDC represents less than 1% of the total state budget	
Total State Budget	\$24,800,701,641

FISCAL YEAR 2014 SUMMARY

County Assistance Payments—\$1,689,160

Paid county levee and drainage district taxes, forest cropland payments, in lieu of real estate taxes, and county aid road trust payments. Since 1980, paid more than \$19 million to Missouri counties in lieu of real estate taxes.

Capital Improvements—\$14,638,655

Constructed, renovated, and repaired fish hatcheries, river accesses, wetlands, shooting ranges, nature centers, and facilities statewide; and acquired land.

Information Technology—\$12,743,449

Includes information management and technology that supported all computers, software, telephones, and other telecommunications systems.

Fisheries—\$14,319,678 Managed sport fish populations, aquatic biodiversity, and aquatic habitats. Managed 1,025 areas for fishing, and assisted 5,556 landowners with stream and lake management. Stocked about 11.8 million fish in public waters.

Forestry—\$18,854,335 Distributed about 3 million seedlings to 9,300 landowners, provided forestry assistance on more than 114,485 acres of private land and to more than 159 municipalities, managed 438,700 acres of public forest, monitored insect and disease threats, and facilitated development of the state's forest industry.

Wildlife—\$21,345,613 Managed more than 163,000 acres of public land. Monitored federally endangered or threatened species. Identified priority geographies to focus investments. Aided guidance and funding for national and international bird conservation. Facilitated about 43,000 hunter trips through managed hunts.

(continued on Page 28)

FISCAL YEAR 2014 SUMMARY

(continued from Page 27)

Outreach and Education—\$17,058,239

About a million people visited nature, education, and visitor centers, and about 170,000 used staffed shooting ranges. More than 550,000 subscribed to the *Missouri Conservationist*, more than 175,000 subscribed to *Xplor*, and there were about 7 million visits to MDC's public websites by more than 4.2 million users. Also provided more than \$250,000 in grants to schools and conservation curriculums for schools.

Private Land Services—\$9,111,375

Provided 32,437 rural and urban landowner contacts, affected 244,600 acres through technical assistance to landowners, provided habitat management workshops to 31,946, assisted USDA with enrolling 1,685 contracts affecting 149,195 acres through the Wetland Reserve Program (WRP), and paid out \$1.71 to Missouri landowners in cost-share and incentives through the Department's Landowner Assistance Program.

Protection—\$16,991,966 Provided wildlife law enforcement in every county as well as resource management, information, education, and public service. Conservation agents contacted approximately 657,000 people, and they coordinated the Share the Harvest program. Conservation agents, along with 998 volunteers donating more than 12,000 hours, conducted more than 1,100 hunter education classes, certifying more than 20,000 students.

Resource Science—\$12,204,839 Monitored the status of Missouri's fish, forests, plants, and wildlife, recommended conservation actions, evaluated these actions, and reported the results. Tens of thousands of Missourians were contacted to determine their outdoor activities and opinions about conservation programs.

Regional Public Contact Offices—\$2,274,989 Provided regional offices to directly serve Missourians.

Administrative Services—\$13,326,710

Paid for hunting and fishing permit sale systems, fiscal services, purchasing, distribution center, and sign shop. Provided agency-wide postage and printing services, fleet management, vehicle and equipment maintenance, and other agency appropriations.

Human Resources—\$2,559,491

Provided the services to recruit, employ, and train employees.

Design and Development—\$14,644,427

Provided engineering, architectural design, cultural resource review, surveying, and construction, as well as maintenance of conservation areas and facilities.

Administration—\$2,867,828 Provided audits, legal counsel, strategic planning coordination, federal reimbursement administration, environmental policy development, public involvement, and river basin management.

Social Media

The Department's Facebook page has more than 117,000 likes and reaches almost 75,000 people per week who share our information with more than 5.5 million friends. Our Twitter feed has more than 5,000 followers who then pass our tweets along to thousands more. The Department's YouTube channels contain more than 1,000 videos and average about 100,000 views per month with more than 8.5 million total views. Department online photos through Flickr offer over 1,000 images with more than 2,500 reader photos, which have had more than 295,000 lifetime views. The Department has also recently delved into the world of Google+ Hangouts, providing a new way to reach a more diverse audience.

Habitat-Management Workshops

The Department held or participated in more than 543 habitat management workshops and field days for more than 32,000 private landowners. The workshops focused on management techniques to benefit early successional wildlife such as quail, rabbits, and grassland birds.

Private Lake and Stream Management

Fisheries staff responded to 4,795 requests for watershed, floodplain, riparian corridor, stream, or lake management information and/or technical assistance. Six hundred and fifty-five on-site visits were made and 106 recommendations or management plans were written. On-site work included 137 fish-population surveys, 17 renovations, and 51 fish-kill investigations. Staff conducted 19 stream or lake management workshops for 835 people. Staff also coordinated or participated in 14 active watershed-management projects.

Forest Management for Landowners

The Department provided forest management on-site technical assistance to 1,715 landowners throughout the state, impacting 114,485 acres. Many of these on-site visits resulted in a written management plan. A total of 300 plans covering 27,828 acres were written. In addition, 77 private land timber sales were marked and 232 landowners were referred to a forest consultant.

Landowner-Led Conservation Habitat Cooperatives

The Department and nongovernment organizations provided 45 wildlife and habitat cooperatives with information through workshops and educational meetings in fiscal year 2014.

Listened to Missourians

Part of delivering excellent public service is to listen to and understand Missourians. In fiscal year 2014, there were 124 activities that involved 86,427 people. These included surveys, focus groups, open houses, comment periods, com-



ments to the Regulations Committee, and contacts with the Department's ombudsman.

ENGAGE PARTNERS AT ALL LEVELS

Monitoring Forest Health

The Forest Health Program is an effort among the Department and other state and federal agencies to monitor and evaluate forest health and provide information to Missourians. In fiscal year 2014, staff responded to 3,043 requests for assistance with forest health issues and worked with state and federal partners to develop the Missouri Invasive Forest Pest Plan, which outlines combined state and federal responses to invasive forest insects and diseases in Missouri.

Volunteer Fire Departments

The Department, in cooperation with the U. S. Forest Service, provided \$386,938 in grants to 183 volunteer fire departments. Equipment was also provided to fire departments through two federal programs. Through the Federal Excess Property Program, we obtained equipment valued at \$16,251. Through the Fire Fighter Program, we obtained equipment valued at \$3,337,661.

The Missouri National Archery in the Schools program promotes education, self-esteem, and physical activity through the sport of archery to more than 125,000 Missouri students.

Share the Harvest

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations, and local meat processors. In 2013, approximately 4,489 hunters donated 227,358 pounds of venison to less-fortunate Missourians.

Archery in the Schools

Missouri National Archery in the Schools (MoNASP) is coordinated through the Department and the Conservation Federation of Missouri. MoNASP is an affiliate of the National Archery in the Schools Program and promotes education, self-esteem, and physical activity through the sport of archery to more than 125,000 Missouri students. In the first seven months of the year, 123 schools were added. The sixth annual MoNASP state tournament, held March 2014, drew 1,344 student archers and more than 7,500 observers and supporters. ▲

North American Least Shrew

THE LEAST SHREW (*Cryptotis parva*) is one of the smallest mammals in Missouri, and until last winter I had never encountered one. I had just walked out the door at sunrise when I found the tiny shrew rustling about in the leaf litter next to our patio. I had seen other shrews, much larger, and gray in color, but I was taken by the reddish brown fur of this one. I caught the wee shrew for a closer look, and after consultation with a wildlife biologist, determined it to be a least shrew.

As I handled the shrew, I was surprised by its gentle nature because most descriptions of shrews include adjectives such as, “bel-ligerent” or “pugnacious.” The nervous shrew scrambled through my fingers in search of an exit route, much like that of a field mouse, but it wasn’t aggressive at all. I suppose most of the behaviors of shrews that have been described in guides, such as *The Wild Mammals of Missouri* by Charles and Elizabeth Schwartz, refer to their interactions with other shrews and animals that are closer to their own size.

The least shrew measures about 3 inches long and has a long, pointed snout and tiny black eyes like other shrews. Its coat is brown, even darker in winter, with gray underparts. Although seldom seen by man, they live throughout Missouri. Least shrews, which prefer dry fallow fields such as those around my home, often use burrows and tunnels of neighboring rodents, but they spend some of their time foraging on the surface. They sometimes dig their own tunnels, which may be just beneath the surface or much deeper.

Although some shrews possess a powerful poison in their saliva that is used to subdue prey, the least shrew is not so equipped; instead it depends on expert hunting skills, often going for the vulnerable joints of its prey’s appendages, according to *The Wild Mammals of Missouri*. Their diet includes small insects, snails, slugs, earthworms, and spiders. Like other shrews, the least shrew has poor eyesight and depends on a well-developed sense of touch. Reproduction occurs throughout much of the year and several litters of young, which measure less than an inch at birth, are produced.

Least shrews have been described as having a pungent odor, due to powerful scent glands, but I didn’t detect any odor from the one I found. They also produce a variety of sounds, described as “puts,” and “clicks,” but I didn’t hear a peep from my specimen. According to research, least shrews are known to use a form of echolocation to explore tunnels but probably not to search for food.

I was fortunate to have my camera in hand as I released the diminutive shrew where I found it. I was impressed at how fast it disappeared into the grass, allowing only two shutter clicks before fading away. I was confident that it was none the worse for wear after its first encounter with a meddlesome giant.

—Story and photograph by Danny Brown

📷 300mm lens + 1.4 teleconverter • f/5.6 • 1/60 sec • ISO 400

We help people discover nature through our online field guide. Visit mdc.mo.gov/node/73 to learn more about Missouri’s plants and animals.





Ted Shanks Conservation Area

Located in northeast Missouri along the banks of the Mississippi and Salt rivers, this area is home to numerous wetland wildlife and plant species and provides great outdoor recreational opportunities.

THIS 6,705-ACRE AREA historically was used as a battleground by the Sac, Fox, and Osage Indians and was later granted to prominent French fur traders and businessmen like Francois Saucier Jr. and Jean Pierre Chouteau, who helped found Missouri's early cities, including St. Louis and Ste. Genevieve. Much later (1970–1971), the area was purchased with Pittman-Robertson funds collected by a federal excise tax on sporting arms and ammunition. The area is one of 15 Conservation Department-owned intensively managed wetland complexes in the state that provides valuable wetland habitat for both migratory birds and resident wetland wildlife that reside on the area year-round.

Bald eagles are also present on the area during their annual spring and fall migrations. In 1997, they began nesting on the area and have been producing successful nests almost every year since. Nesting activity starts in mid- to late February, and young usually leave the nest by the middle of June. Some of the best times to see eagles on Ted Shanks are during peak migration events in late fall and winter when thousands of migrating waterfowl move into and through the area. The eagles key in on large concentrations of waterfowl as a primary food source. Eagle numbers on the area frequently top 100 during late December and January!

Wetland management at Ted Shanks includes the manipulation of water levels in the area's many pools to provide stopover habitat and food for migratory birds. The area hosts large concentra-



70–200mm lens • f/4 • 1/2000 sec • ISO 200 | by Noppadol Paothong

tions of waterfowl during both spring and fall migrations with peak numbers usually occurring in late November and December and again in February and March. The largest documented concentration of waterfowl on the area occurred in 1978 when an estimated 305,000 ducks were counted.

Waterfowl hunting is a popular tradition during the fall months, and waterfowl hunters arrive two and a half hours before sunrise to enter a drawing for available hunting spots that include up to 34 wade-and-shoot spots, eight blinds, and one ADA-accessible blind.

Large concentrations of shorebirds are routinely found on Ted Shanks in late spring, summer, and early fall, making birding opportunities excellent. Recent highlights include more than 100 American avocets feeding in a pool of receding floodwater in July 2014, and a pair of black-necked stilts spotted on a levee during the 2013 flood.

—Mike Flaspohler, area manager



Ted Shanks Conservation Area

Recreation opportunities: Hunting, fishing, trapping, birding, and wildlife viewing. Check area regulations on the Conservation Area Atlas at mdc.mo.gov/atlas; portions are seasonally restricted to provide refuge habitat for migratory birds.

Unique features: Open marsh, mixed shrub and scrub emergent wetlands, bottomland hardwood forest, upland forest, oxbow lakes and sloughs, Oval Lake Natural Area

For More Information: Call 573-248-2530 or visit mdc.mo.gov/a7011



MDC DISCOVER nature

To find more events near you, call your regional office (phone numbers on Page 3), or visit mdc.mo.gov and choose your region.

SAUSAGE AND JERKY MAKING

JAN. 7 • WEDNESDAY • 6–8 P.M.

Kansas City Region, Parma Woods Shooting Range and Outdoor Education Center, 15900 NW River Road, Parkville, MO 64152

Registration required, call 816-891-9941

All ages

It's easy to make great sausage and jerky. Whether you're a beginner or a seasoned veteran, there is always something to learn. We'll share equipment options and take you through the basic processes of making different sausages and jerky.

NATURE CENTER AT NIGHT: MOUNTAIN LION MYSTERIES

JAN. 8 • THURSDAY • 5–8 P.M.

Southeast Region, Cape Girardeau Conservation Nature Center, 2289 County Park Drive, Cape Girardeau, MO 63701

No registration, call 573-290-5218 for information

All ages, families

Come in out of the cold to learn about the mountain lion's mysteries. There will be hands-on displays and a presentation at 6:30 p.m.



INTRODUCTION TO SKEET SHOOTING

JAN. 10 • SATURDAY • 9 A.M.–12 P.M. PM

Kansas City Region, Lake City Shooting Range and Outdoor Education Center, 28505 E. Truman Road, Buckner, MO 64016

Registration required, call 816-249-3194

Ages 12 and older

Need to improve your wing shooting skills? Try skeet shooting! It's a great way to improve your basic shotgun skills as well as your hit ratio on winged game. You may even pick up a new sport at the same time.

TREE TAPPING

JAN. 17 • SATURDAY • 10–11:30 A.M.

Southeast Region, Cape Girardeau Conservation Nature Center, 2289 County Park Drive, Cape Girardeau, MO 63701

Registration required (beginning Jan. 2), call 573-290-5218

Ages 7 and older, families

'Tis the season for maple sugaring! Before you can enjoy sweet maple syrup, you've got to collect the sap. Learn how to identify sugar maple trees and select the right ones. Then go outside to try your hand at tapping the trees. This program covers only the tree tapping portion. Join us Feb. 14 for our maple sugaring event to learn the rest of the syrup story.



6

IDEAS FOR FAMILY FUN



SHORT-EARED OWL HIKE

JAN. 17 • SATURDAY • 4:30–6 P.M.

Southwest Region, Joplin Office in the Wildcat Glades Conservation & Audubon Center, 201 W. Riviera, Suite B., Joplin, MO 64804

Event held at Shawnee Trail Conservation Area, Mindemines

Registration required, call 417-629-3423

Ages 7 and older

It's winter in Missouri, and short-eared owls may be seen flying low over native grasslands in search of mice, rabbits, and other small mammals. Join us on an evening hike to discover more about these and other feathered winter residents.

NATURE AND THE ARTS

JAN. 24 • SATURDAY • 1–4 P.M.

Southeast Region, Cape Girardeau Conservation Nature Center, 2289 County Park Drive, Cape Girardeau, MO 63701

No registration required, call 573-290-5218

All ages, families, groups

Be "naturally" inspired by artists who love nature and have interesting ways of incorporating it into their work. Listen to music, visit with artisans, and watch as these talented folks demonstrate their passion and display their crafts. Kids and adults will have the opportunity to make a nature craft to take home.



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I Am Conservation

Ramsey Shouman (left) and Rob Murray pause before conducting a controlled burn of native warm-season grasses on their portion of the Boonslick Wildlife Cooperative in Howard County. The cooperative "is a group of landowners and neighbors who have come together to try to communicate with each other, improve habitat, and manage wildlife," said Murray. The Department of Conservation also offers support. Shouman said that the co-op, which was started in 2012, is composed of 11 different properties and comprises nearly 2,600 acres. "We watch out for each other's property, and we are able to share both the failures and successes of the land and wildlife management projects," Shouman said that a big goal of the cooperative is to improve wildlife management on a bigger scale than just an individual landowner's property. "Our goal is to create an area that consistently produces better hunting, fishing, and outdoor opportunities," said Shouman. "We also expect that having the surrounding properties involved in a co-op will increase property values and attract outdoor enthusiasts to purchase properties in the area." Added safety is also a benefit, the men said, as the co-op allows for a neighborhood watch, of sorts, by prompting landowners to watch out for poachers and trespassers on their neighbors' land. "We have always enjoyed hunting with friends on our own property, but now we also share in our neighbors' successes and adventures," said Murray. "Knowing our neighbors better and sharing experiences with them has enriched our own personal experiences." —*photograph by David Stonner*